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Maltese Association of Radiologists  
and Nuclear Medicine Physicians

# Cardiac CT Scan

Cardiac CT (computed tomography) is a noninvasive medical examination where 3D images of the heart and the coronary vessels (the arteries that supply the heart with blood) are acquired. These images can help the Radiologist or Cardiologist to detect or evaluate coronary heart disease, calcium buildup in the coronary arteries, problems with heart function and valves, and pericardial disease. Furthermore, this is used to monitor the results of coronary artery bypass grafting or to follow up any abnormal findings from previous exams.

## **What does the examination involve?**

The examination will take place in a cardiac capable CT scanner room. Throughout the process you will be assessed a radiographers who will check your heart rate, blood pressure and measure your weight and height. Depending on your heart rate, we may administer some medication to slow down your heart, this will help us to acquire better images. This medication may be given to you in the form of tablets or injection after which you will be asked to wait in the waiting area until the medication start to work (this may take up to an hour).

When your heart rate reaches the ideal values, you will be then asked to change into a hospital gown and to lie down on the scanner couch. Before we start the scan, we will attach some ECG electrodes (small sticky patches) on your chest to monitor your heart and you will be given some breathing instructions.

For most scans, we may need to administer an injection of contrast material (liquid dye containing iodine) and a spray underneath your tongue which dilates the blood vessels of the heart. We will then acquire the images.



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This procedure should not be painful and will take only a few minutes, however, if the administration of medication is needed we will need to monitor you before and after the scan, therefore, the appointment can take between 1- 2 hours.

## **How to prepare for your CT cardiac scan**

### 12 Hours before your appointment

- It's important not to consume any caffeine-containing products, these include coffee, black and green tea, cola, energy drinks, chocolate, as well as, medicine for colds or weight-loss.
- Do not take Viagra, Cialis, or similar medication used for erectile dysfunction.

### On the day of your appointment

- Take any vital medication such as steroids, diabetic drugs or heart drugs as usual.
- If you were prescribed with medication for the Scan (eg: Metoprolol), It's very important that you take this medication as instructed by your doctor.
- Do not eat for 4 hours before the examination. However, it is very important to drink water during these 4 hours.
- Bring with you a list of all the medicines that you are taking.
- If you have a pacemaker this may need to be temporarily adjusted for the duration of the scan. Please bring any written details about the pacemaker with you.

## **After the scan**

After the scan you will be asked to stay in the waiting area where we will keep monitoring your heart rate and blood pressure until the effect of the medication wears off, this may take up to an hour. Kindly notify the staff if you feel light-headed, dizzy or unwell.



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We will make sure that you are well enough before we send you home. You can resume your daily routine straight after the scan, however, we advise you not to drive immediately after, so you should arrange for someone to collect you. If you operate heavy machinery at work, you should avoid doing this on the day of the scan.

## **Are there any possible complications or risks?**

The use of intravenous dye is also generally very safe. Mild and self-limiting side effects may include a headache, a skin rash and dizziness. The dye may rarely cause an allergic reaction which can present itself as a rash, difficulty breathing and swelling of the lips and mouth. It is therefore important to inform the radiographer if you feel unwell as the CT room is equipped with the necessary medications to treat these rare reactions.

**Compiled by Dr. Luise Reichmuth**